

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/623,500A  
Source: 1Fw16  
Date Processed by STIC: 9/19/06

# ***ENTERED***



IFW16

## RAW SEQUENCE LISTING

DATE: 09/19/2006

PATENT APPLICATION: US/10/623,500A

TIME: 13:28:54

Input Set : A:\10623500\_ST25\_txt.TXT

Output Set: N:\CRF4\09192006\J623500A.raw

3 <110> APPLICANT: Vanderkimpen, Greet  
 4 Van Eldik, Gerben  
 5 Meulewaeter, Frank  
 7 <120> TITLE OF INVENTION: Corn root preferential promoters and uses thereof  
 9 <130> FILE REFERENCE: 1021565-000119  
 11 <140> CURRENT APPLICATION NUMBER: US 10/623,500A  
 12 <141> CURRENT FILING DATE: 2003-07-22  
 14 <150> PRIOR APPLICATION NUMBER: US 60/399,983  
 15 <151> PRIOR FILING DATE: 2002-07-31  
 17 <160> NUMBER OF SEQ ID NOS: 31  
 19 <170> SOFTWARE: PatentIn version 3.3  
 21 <210> SEQ ID NO: 1  
 22 <211> LENGTH: 378  
 23 <212> TYPE: DNA  
 24 <213> ORGANISM: Zea mays  
 27 <220> FEATURE:  
 28 <221> NAME/KEY: misc\_feature  
 29 <222> LOCATION: (1)..(338)  
 30 <223> OTHER INFORMATION: promoter  
 32 <220> FEATURE:  
 33 <221> NAME/KEY: misc\_feature  
 34 <222> LOCATION: (339)..(370)  
 35 <223> OTHER INFORMATION: 5' UTR  
 37 <400> SEQUENCE: 1  
 38 tactacagat aacacgacag ttaacgagcg ggtatgggtt gttttccttg agcactgttg 60  
 40 ttctctagaa tctctgaatc tctctctgtc ttgatgacac cgagcggaaa tagcagttgg 120  
 42 aagaggatgat tgggcttcag cgcgcgatcc aacccaagtg ggttcacaa cgtgaacctc 180  
 44 atgcagctta aaatacagcc agttgtgatc catctgccac agctgtttct acctcagatg 240  
 46 tgctacacag tgtattacct gtttctacct cgcagatgtg ctacacagtt gcttatgact 300  
 48 gcctataaaa tggccgggat cggtgaggct gctggaacca aggagagaga gcatatatat 360  
 50 ccaccgatcc atggcatg 378  
 53 <210> SEQ ID NO: 2  
 54 <211> LENGTH: 1236  
 55 <212> TYPE: DNA  
 56 <213> ORGANISM: Zea mays  
 59 <220> FEATURE:  
 60 <221> NAME/KEY: misc\_feature  
 61 <222> LOCATION: (11)..(1196)  
 62 <223> OTHER INFORMATION: promoter  
 64 <220> FEATURE:  
 65 <221> NAME/KEY: misc\_feature  
 66 <222> LOCATION: (1197)..(1228)  
 67 <223> OTHER INFORMATION: 5' UTR

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69 &lt;400&gt; SEQUENCE: 2

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70 cgggatcccg gctttctgca ctggacgtag tgtactttat acttgaaact tgtataaatt      60
72 tgtgtctttt atactccctc agtttgaaat atagttcttt ctagecctctt tttttccgtc      120
74 cacactcatt tgaatgataa taaatataga tatacataca aactatatctc atagggttaat      180
76 taataaatgt atatttagtc taaaatgaaa tatattttac ccatcgtatt ccttatgcat      240
78 gaaatgttga tctacttgtc tgatggaaaa atactatgac gttgttgtag cagaccgcac      300
80 ctaaatacaa ctgttttcag agatggccat tctattattg tagatttggtg atacgtacga      360
82 tgtacttttt tatccataaa ataccgtacc attatgatat ggatatcttg atgagagggga      420
84 ctcatatctt ctctctatat atataaacac ctatatatca aacaggcatc aagaaaaata      480
86 gatgattttt ttttctgaag tagagtgaca gaagcagctg aagtgtgagt ctttttggtt      540
88 caattttata atgtgtaaag aaaatgacgc caatgaaata tgtgtctggg ctgacgtggt      600
90 gtttggtgaa agccaatttt gttgtatata gggggggccag agcccagttg tatttggtgc      660
92 ccggactggc gccaaaaaaa aaaatccgga tagtactatt ccgctaactg tgtcacactt      720
94 tatctaaaat tagtcatcca aattaaagaa ctaaccttag atacaaaaaa ttaaacaag      780
96 tatgacaagt taggtagcaa actaaactaa agaggataac acaacagtta accgtcgacg      840
98 tgcgcggcct gaatttacta ctacagataa cagcagagtt aacgagcggg tatgggttgt      900
100 tttccttgag cactgttggt ctctagaatc tctgaatctc tctctgtctt gatgacaccg      960
102 agcggaaata gcagttggaa gaggtgattg ggcttcagcg cgcgatccaa cccaagtggg      1020
104 ttccacaacg tgaacctcat gcagcttaaa atacagccag ttgtgatcca tctgccacag      1080
106 ctgtttctac ctcatatgtg ctacacagtg tattacctgt ttctacctcg cagatgtgct      1140
108 acacagttgc ttatgactgc ctataaaatg gccgggatcg gtgaggtgctc tggaaccaag      1200
110 gagagagagc atatatatcc accgatccat ggcagtg      1236

```

113 &lt;210&gt; SEQ ID NO: 3

114 &lt;211&gt; LENGTH: 592

115 &lt;212&gt; TYPE: DNA

116 &lt;213&gt; ORGANISM: Artificial

118 &lt;220&gt; FEATURE:

119 &lt;223&gt; OTHER INFORMATION: cDNA of the GL4 transcript

122 &lt;220&gt; FEATURE:

123 &lt;221&gt; NAME/KEY: misc\_feature

124 &lt;222&gt; LOCATION: (540)..(540)

125 &lt;223&gt; OTHER INFORMATION: n at position 540 represents any nucleotide

127 &lt;400&gt; SEQUENCE: 3

```

128 caaggagaga gagcatatat atccaccgat catgatgaag ggtggcagca agaaggaagt      60
130 ggccgggtgcg gcggcggtgg tggccatact gctggttctg cagctgatgg cagctccacc      120
132 gacggccatg gccgccgct cgcgcgcggg agccgtgccg gatggctccc tcgccacgac      180
134 gcccaagggtg acgatgctgt cagccacgct gtgctacacg ggggagacat gcaaatacat      240
136 tactctgctc actcctgctt gctcctgtaa ctatgatgat cgtcgtgct acatcatatt      300
138 tactcctgct gctgcttgag gccattctgt gtacgtgaat gaagccacta ctactctcac      360
140 acagcatgcg ccggccgacg acgtgctgac gtatatatat acgctctacc tcgtgagctt      420
142 ttgttcagat gatacgtggt tcaaggcatc catccatcca tggatgctta tgtacgtata      480
W--> 144 tgtgttagtc gtgtgtcagg caaccgggca gcagaagggg gtgttgtatt atatatattn      540
146 acgtcttctg gtgattaaat aataaagggg ggcagtgttg atgtgtgcaa aa      592

```

149 &lt;210&gt; SEQ ID NO: 4

150 &lt;211&gt; LENGTH: 95

151 &lt;212&gt; TYPE: PRT

152 &lt;213&gt; ORGANISM: Zea mays

154 &lt;400&gt; SEQUENCE: 4

156 Met Met Lys Gly Gly Ser Lys Lys Glu Val Ala Gly Ala Ala Ala Val

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Input Set : A:\10623500\_ST25\_txt.TXT

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```

157 1          5          10          15
160 Val Ala Ile Leu Leu Val Leu Gln Leu Met Ala Ala Pro Pro Thr Ala
161          20          25          30
164 Met Ala Ala Arg Ser Pro Arg Gly Ala Val Pro Asp Gly Ser Leu Ala
165          35          40          45
168 Thr Thr Pro Lys Val Thr Met Leu Ser Ala Thr Leu Cys Tyr Thr Gly
169          50          55          60
172 Glu Thr Cys Lys Tyr Ile Thr Cys Leu Thr Pro Ala Cys Ser Cys Asn
173 65          70          75          80
176 Tyr Asp Asp Arg Arg Cys Tyr Ile Ile Phe Thr Pro Ala Ala Ala
177          85          90          95
180 <210> SEQ ID NO: 5
181 <211> LENGTH: 535
182 <212> TYPE: DNA
183 <213> ORGANISM: Artificial
185 <220> FEATURE:
186 <223> OTHER INFORMATION: cDNA of the GL5 transcript
189 <220> FEATURE:
190 <221> NAME/KEY: misc_feature
191 <222> LOCATION: (82)..(82)
192 <223> OTHER INFORMATION: n represents any nucleotide
194 <400> SEQUENCE: 5
195 ccaatcagat agagagcata gtogatcatg aagggtggca agaagaaagt ggccggtgcg      60
W--> 197 gtggtggcca tactgctggt tntgcagctc atggcagctc caccgacggc catggccgcc      120
199 cgctcgccgc gcggagccgt gccggatggc tccctcgcca cgacgcccac ggtgacgatg      180
201 ctgtcgccca cgctgtgcta cacgggggag acatgcaaat acattggctg cctcactcct      240
203 gcttgctcct gcaactatag tgatcgctca tgctacatca tatttactcc tgttgcttga      300
205 ggccattccg cgaagccaca actcttataa tatgcatgcg ccggccgacg acgacgcgcg      360
207 ctgcctctcg tgagcttctg ttcaagtgat gcatgtttca aggcattccat ggatgcttta      420
209 cgtatatgcg tattaattag ccgtgtcagg gaaccggaca gaagggggtg ttgttttata      480
211 tttacgtctt ctggtgatca aataaagggg aaatatatgt tggatgtgtg caaaa      535
214 <210> SEQ ID NO: 6
215 <211> LENGTH: 90
216 <212> TYPE: PRT
217 <213> ORGANISM: Zea mays
219 <400> SEQUENCE: 6
221 Met Lys Gly Gly Lys Lys Glu Val Ala Gly Ala Val Val Ala Ile Leu
222 1          5          10          15
225 Leu Val Leu Gln Leu Met Ala Ala Pro Pro Thr Ala Met Ala Ala Arg
226          20          25          30
229 Ser Pro Arg Gly Ala Val Pro Asp Gly Ser Leu Ala Thr Thr Pro Lys
230          35          40          45
233 Val Thr Met Leu Ser Ala Thr Leu Cys Tyr Thr Gly Glu Thr Cys Lys
234          50          55          60
237 Tyr Ile Gly Cys Leu Thr Pro Ala Cys Ser Cys Asn Tyr Ser Asp Arg
238 65          70          75          80
241 Leu Cys Tyr Ile Ile Phe Thr Pro Val Ala
242          85          90
245 <210> SEQ ID NO: 7

```

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Input Set : A:\10623500\_ST25\_txt.TXT

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246 <211> LENGTH: 24
247 <212> TYPE: DNA
248 <213> ORGANISM: Artificial
250 <220> FEATURE:
251 <223> OTHER INFORMATION: oligonucleotide primer GVK27
253 <400> SEQUENCE: 7
254 gctgacagca tcgtcacctt gggc 24
257 <210> SEQ ID NO: 8
258 <211> LENGTH: 25
259 <212> TYPE: DNA
260 <213> ORGANISM: Artificial
262 <220> FEATURE:
263 <223> OTHER INFORMATION: oligonucleotide primer GVK28
265 <400> SEQUENCE: 8
266 gctgcagaac cagcagtatg gccac 25
269 <210> SEQ ID NO: 9
270 <211> LENGTH: 27
271 <212> TYPE: DNA
272 <213> ORGANISM: Artificial
274 <220> FEATURE:
275 <223> OTHER INFORMATION: oligonucleotide primer GVK29
277 <400> SEQUENCE: 9
278 catgccatgg atcggtggat atatatg 27
281 <210> SEQ ID NO: 10
282 <211> LENGTH: 25
283 <212> TYPE: DNA
284 <213> ORGANISM: Artificial
286 <220> FEATURE:
287 <223> OTHER INFORMATION: oligonucleotide primer GVK30
289 <400> SEQUENCE: 10
290 catgccatgg atcgactatg ctctc 25
293 <210> SEQ ID NO: 11
294 <211> LENGTH: 164
295 <212> TYPE: DNA
296 <213> ORGANISM: Artificial
298 <220> FEATURE:
299 <223> OTHER INFORMATION: cDNA of 3' end of the GL12 transcript
302 <220> FEATURE:
303 <221> NAME/KEY: misc_feature
304 <222> LOCATION: (45)..(45)
305 <223> OTHER INFORMATION: n= any nucleotide
307 <220> FEATURE:
308 <221> NAME/KEY: misc_feature
309 <222> LOCATION: (53)..(53)
310 <223> OTHER INFORMATION: n= any nucleotide
312 <220> FEATURE:
313 <221> NAME/KEY: misc_feature
314 <222> LOCATION: (57)..(57)
315 <223> OTHER INFORMATION: n= any nucleotide

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Input Set : A:\10623500\_ST25\_txt.TXT

Output Set: N:\CRF4\09192006\J623500A.raw

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317 <220> FEATURE:
318 <221> NAME/KEY: misc_feature
319 <222> LOCATION: (59)..(59)
320 <223> OTHER INFORMATION: n= any nucleotide
322 <220> FEATURE:
323 <221> NAME/KEY: misc_feature
324 <222> LOCATION: (61)..(61)
325 <223> OTHER INFORMATION: n= any nucleotide
327 <220> FEATURE:
328 <221> NAME/KEY: misc_feature
329 <222> LOCATION: (88)..(88)
330 <223> OTHER INFORMATION: n= any nucleotide
332 <220> FEATURE:
333 <221> NAME/KEY: misc_feature
334 <222> LOCATION: (93)..(93)
335 <223> OTHER INFORMATION: n= any nucleotide
337 <220> FEATURE:
338 <221> NAME/KEY: misc_feature
339 <222> LOCATION: (96)..(96)
340 <223> OTHER INFORMATION: n= any nucleotide
342 <220> FEATURE:
343 <221> NAME/KEY: misc_feature
344 <222> LOCATION: (126)..(126)
345 <223> OTHER INFORMATION: n= any nucleotide
347 <220> FEATURE:
348 <221> NAME/KEY: misc_feature
349 <222> LOCATION: (157)..(157)
350 <223> OTHER INFORMATION: n= any nucleotide
352 <400> SEQUENCE: 11
W--> 353 ttttacacac atccaacatg ccccccttta ttatttaatc accanaagac gtnaatntnt      60
355 nttattcaac accccctttt gctgccngg tgnctnacac accactaaca catttcggt      120
357 cataancatt catgctgggc cgcgctgtgc ccgacancctt aaac      164
360 <210> SEQ ID NO: 12
361 <211> LENGTH: 8514
362 <212> TYPE: DNA
363 <213> ORGANISM: Artificial
365 <220> FEATURE:
366 <223> OTHER INFORMATION: plasmid pTWV011
369 <220> FEATURE:
370 <221> NAME/KEY: misc_feature
371 <222> LOCATION: (52)..(1)
372 <223> OTHER INFORMATION: LB= left T-DNA border
374 <220> FEATURE:
375 <221> NAME/KEY: misc_feature
376 <222> LOCATION: (318)..(58)
377 <223> OTHER INFORMATION: 3' nos
379 <220> FEATURE:
380 <221> NAME/KEY: misc_feature
381 <222> LOCATION: (888)..(337)

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/623,500A

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**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 540  
Seq#:5; N Pos. 82  
Seq#:11; N Pos. 45, 53, 57, 59, 61, 88, 93, 96, 126, 157  
Seq#:13; N Pos. 5630, 8436  
Seq#:26; N Pos. 1  
Seq#:27; N Pos. 1, 11  
Seq#:28; N Pos. 4, 9  
Seq#:29; N Pos. 5  
Seq#:30; N Pos. 1  
Seq#:31; N Pos. 2, 6

**Invalid <213> Response:**

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,5,7,8,9,10,11,12,13,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31

**VERIFICATION SUMMARY**

DATE: 09/19/2006

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Input Set : A:\10623500\_ST25\_txt.TXT

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L:144 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:480  
L:197 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:60  
L:353 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0  
M:341 Repeated in SeqNo=11  
L:991 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:5580  
M:341 Repeated in SeqNo=13  
L:1294 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0  
L:1317 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0  
L:1350 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0  
L:1368 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0  
L:1386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0  
L:1409 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0